I. Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims

1. (Presently Amended) An electronically conducting fuel cell component comprising:

a) a porous metal flow field comprising pores;

b) an intermediate layer bonded directly to the porous metal flow field; and

c) an electrode bonded directly to the intermediate layer

wherein the porous metal flow field is configured to deliver gaseous reactants to the intermediate layer by flowing through the pores of the porous metal flow field.

2. (Original) The fuel cell component of claim 1, wherein the porous flow field comprises a three-dimensional reticulated metal structure.

3. (Original) The fuel cell component of claim 2, wherein the three-dimensional reticulated structure comprises porous copper, porous nickel, porous aluminum, porous titanium, or a porous aluminum-titanium alloy.

4. (Original) The fuel cell component of claim 3, wherein the three-dimensional reticulated structure comprises porous nickel.

5. (Original) The fuel cell component of claim 1, wherein the porous metal flow-field further comprises a protecting layer disposed on at least one surface thereof.

6. (Original) The fuel cell component of claim 5, wherein the protecting layer comprises a metal or a metal oxide.

7. (Original) The fuel cell component of claim 6, wherein the protecting layer comprises tin, copper, nickel, aluminum, titanium, or gold.

8. (Original) The fuel cell component of claim 6, wherein the protecting layer comprises ruthenium oxide, titanium oxide, or tin oxide.

9. (Original) The fuel cell component of claim 8, wherein the protecting layer comprises tin oxide.

10. (Original) The fuel cell component of claim 9, wherein the tin oxide layer is between about 1 and about 5 μm thick.

11. (Original) The fuel cell component of claim 10, wherein the tin oxide layer is between about 1 and about 2 μm thick.

12. (Previously submitted) The fuel cell component of claim 1, wherein the intermediate layer comprises a polymer and carbon particles.

13. (Original) The fuel cell component of claim 12, wherein the polymer comprises poly-tetrafluoroethylene, perfluoroethylene-perfluoropropylene copolymer, perfluoroalkoxy, or polyvanilidene fluoride.

14. (Original) The fuel cell component of claim 1, wherein the electrode comprises a polymer electrolyte and an electrocatalyst.

15. (Presently Amended) A method for making an electronically conducting fuel cell component comprising the steps of:

a) directly bonding an electrically conducting intermediate layer to a porous metal flow field comprising pores; and

b) directly bonding an electrode to the intermediate layer

wherein the porous metal flow field is configured to deliver gaseous reactants to the intermediate layer by flowing through the pores of the porous metal flow field.

16. (Previously presented) The method of claim 15, wherein the porous flow field comprises a three-dimensional reticulated metal structure.

17. (Original) The method of claim 16, wherein the three-dimensional reticulated structure comprises porous copper, porous nickel, porous aluminum, porous titanium, or a porous aluminum-titanium alloy.

18. (Original) The method of claim 17, wherein the three-dimensional reticulated structure comprises porous nickel.

19. (Previously presented) The method of claim 15, wherein the porous metal flow-field further comprises a protecting layer disposed on at least one surface thereof.

20. (Original) The method of claim 19, wherein the protecting layer comprises a metal or a metal oxide.

21. (Original) The method of claim 20, wherein the protecting layer comprises tin, copper, nickel, aluminum, titanium, or gold.

22. (Original) The method of claim 20, wherein the protecting layer comprises ruthenium oxide, titanium oxide, or tin oxide.

23. (Original) The method of claim 22, wherein the protecting layer comprises tin oxide.

24. (Original) The method of claim 23, wherein the tin oxide layer is between about 1 and about 5 μm thick.

25. (Original) The method of claim 24, wherein the tin oxide layer is between about 1 and about 2 μm thick.

26. (Previously presented) The method of claim 15, wherein the intermediate layer comprises a polymer and carbon particles.

27. (Original) The method of claim 26, wherein the polymer comprises poly-tetrafluoroethylene, perfluoroethylene-perfluoropropylene copolymer, perfluoroalkoxy, or polyvanilidene fluoride.

28. (Previously presented) The method of claim 15, wherein the electrode comprises a polymer electrolyte and an electrocatalyst.

29. (Previously presented) The fuel cell component of claim 1, wherein the intermediate layer comprises a polymer and carbon black.

30. (Previously presented) The method of claim 15, wherein the intermediate layer comprises a polymer and carbon black.